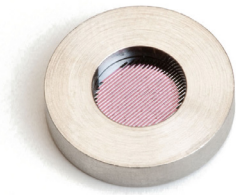
Handling Moxtek® X-ray Windows

Technical Note

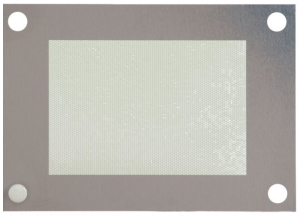


AP3 Windows

BX-1™ Window

DuraBeryllium® Windows

Conflat Flanges



ProLINE Windows

Moxtek® X-ray Windows (AP3, BX-1™, DuraBeryllium®, and Ultra-Thin Polymer) are very thin and fragile, great care should be taken while handling these windows. Excessive shock can damage or break the window. Do not drop or allow the window to strike any surface. The guidelines below should be strictly followed in order to protect the window from damage.

CAUTION: Check local, state, and/or federal regulations before disposing of beryllium windows.

Protecting the Window

The windows can be easily damaged by improper treatment. Do NOT touch the window surface with anything, including a cotton swab or soft brush. Physical abrasion can easily damage windows. It is also important to protect the window as much as possible from dust and other particulate contamination which can induce window failure. Avoid any physical shock to the window. Sudden impacts can damage the window.

Mounting and Assembly

AP3, BX-1 and DuraBeryllium windows must be mounted with the FRONT side facing the high-pressure side of the instrument. Never allow BX-1, AP3, and DuraBeryllium windows to exceed their maximum differential pressure settings. Please refer to product specific data sheets for each products pressure ratings. Contact Moxtek before leak-checking ProLINE® Series Windows.

Pumping and Venting

Pumping down a detector chamber must be done slowly in order to reduce the risk of pressure shock to the window.

Similarly, venting the detector chamber must also be done slowly in order to prevent any particles from hitting and damaging the window. Moxtek highly recommends using a particle brake (baffling) to ensure that no particles have a direct path from the vent of the pumping chamber to the window. Without the particle break, venting gases may accelerate particles directly toward the window and cause damage to the window.

Please contact a Moxtek representative for any additional handling or design questions.

Packaging and Shipping

A protective cover must be placed over any x-ray window to protect it from physical contact during shipping. Make sure that there is a vent hole in the cover so that air can escape when the cover is being placed over the window, otherwise extra pressure could unintentionally damage the window. Make sure there is sufficient cushioning to protect the window from any excessive shocks while in transit.

MOXTEK®

Beryllium Health Hazard Information

WARNING: Beryllium is a potential carcinogen.

Note: The Beryllium windows sold by Moxtek do not under normal conditions, represent an inhalation, ingestion or contact health hazard. Exposure limits are not applicable to the Beryllium windows during normal, intended use. Refer to the primary routes of exposure section below for conditions that could cause harmful exposures to Beryllium, as well as MSDS at www.moxtek.com.

PRIMARY ROUTES OF EXPOSURE

INHALATION: An exposure to airborne beryllium in excess of the occupational standard can occur when machining, melting, casting, dross handling, pickling, welding, grinding, sanding, polishing, milling, crushing, or otherwise abrading the surface of solid beryllium in a manner which generates finely divided particles.

INGESTION: There are no known cases of illness resulting from ingestion of beryllium. As a standard hygiene practice after handling Beryllium, hands should be washed before eating or smoking.

SKIN: This product is in an insoluble form and does not pose a potential for an allergic dermal response or skin absorption and can be safely handled with bare hands. See Section VI of MSDS for additional information.

EYES: Injury to the eyes can result from particulate irritation or mechanical injury to the cornea or conjunctiva by dust or particulate. Exposure may result from direct contact with airborne particulate (chips or dust) or contact to the eye of contaminated hands or clothing.

Note: Refer to Material Safety Datasheet (MSDS).

Please visit www.moxtek.com for any further questions on the proper cleaning of x-ray windows

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